Upper Roanoke River (Roanoke and Botetourt Counties, Cities of Roanoke and Salem, Town of Vinton) TMDL Implementation (Cleanup) Plan Development

Steering Committee Meeting Notes

November 21, 2013, 1:00 – 4:00 p.m.

Virginia Department of Environmental Quality, 3019 Peters Creek Rd., Roanoke, VA

Attendance:

- Paula Nash, Mary Dail, Diana Hackenburg, Charlie Lunsford, Jay Roberts, Kip Foster - Virginia Department of Environmental Quality (DEQ)
- Scott Shirley - Western Virginia Water Authority
- Dave Burris - Virginia Department of Health (VDH)
- Tarek Monier - Roanoke County
- Nick Tatalovich, Erin Hagan – Louis Berger Group
- Chuck VanAllman, Josh Pratt – Salem
- Carol Linkenhoker – Botetourt Co.
- John Burke – Gay and Neel, Inc.
- Roy Nester – Town of Christiansburg
- Tom Cain – Lick Run Watershed Association
- Ed Wells, Shane Sawyer – Roanoke Valley Alleghany Regional Commission
- Anita McMillan, Ryan Spitzer – Town of Vinton
- Christopher Blakeman – City of Roanoke
- Ashley Parks – EEE on behalf of VDOT
- Jack Ward – TU
- Tom Dale – Lumsden Associates
- Wendy Jones – Williamson Road Area Business Association
- Larry Iceman – Smith Mountain Lake Association
- Cristina Siegel – Clean Valley Council
- David Perry, Meagan Cupka – Blue Ridge Land Conservancy
- Liz Belcher – Roanoke Valley Greenways
- Bill Tanger – Upper Roanoke River Roundtable

Welcome and Introductions

Attendees introduced themselves. Mary Dail went over the agenda and provided a recap of prior meetings including the June 2013 Open House, Residential and Agricultural Working Groups, Business Working Group and Government Working Group. Mary explained that the purpose of this meeting is to address any concerns that arose during the working group meetings, discuss Best Management Practices (BMPs), BMP costs, and BMP efficiencies. However, it should be noted that only BMPs that have documented efficiencies for reducing bacteria and/or sediment loads will be quantified in the plan. Also, the cost for BMP implementation (per unit) is

also needed. BMPs that lack this information will be considered as "pilot practices" that in some cases warrant further development or even demonstration for local adoption. There will be narrative descriptions of such examples in the plan.

Working Group Summaries

- David Burris presented highlights from the Residential Working Group meeting
- Wendy Jones presented highlights from the Business Working Group meeting
- Mary Dail provided highlights from the Agricultural Working Group and Government Working Group meetings

BMP Discussion

Nick Tatalovich explained the two BMP handouts: *BMP Efficiency and Costs,* and *Summary of Agricultural and Stormwater BMPs.* It was mentioned that the BMP list in the Clean-up Plan should be all-inclusive so as not to exclude a potential BMP from grant funding. It should be noted that only BMPs that have documented efficiencies for reducing bacteria and/or sediment loads will be quantified in the plan. Also, the cost for BMP implementation (per unit) is also needed. BMPs that lack this information will be considered as "pilot practices" that in some cases warrant further development or even demonstration for local adoption. There will be narrative descriptions of such examples in the plan.

Stormwater BMPs Discussion:

- The primary source for stormwater BMP information originated from the DEQ Stormwater Handbook
- Efficiencies and Costs may be refined, if necessary.
- Need to add stream restoration to the list and the group discussed how to estimate cost. DEQ stated that the costs that are included in the plan are estimates. A price range per linear foot would be an appropriate representation of cost.
- Any projects that are currently underway or planned for the near future could be referenced in the Plan and even credited towards source pollutant reductions based on completion dates.
- The group discussed BMPs for upgrading stormwater ponds
- Based on the landuses we know what source reductions are needed, but we don't know exactly where the BMPs are needed.
- There is an established stream restoration project at Garst Mill Park that may provide an example of costs.
- The question was asked about obtaining information from homeowners about rain gardens. Homeowners are going to get credits for BMPs, so therefore there may eventually be a place to obtain this information. Roanoke City citizens can lower their stormwater fee costs by up to 50% by installing BMPs.
- A comment was made that there is a GIS layer for Glade Creek.
- According to the Blue Ridge Land Conservancy, 500 trees have been planted on Blue Ridge Parkway. Conservation easements may have restrictions; however, these may not be available in any databases. There are currently 90,000 acres in easements.

- Salem commented on Erosion and Sediment Control. When there is a 10,000 sq ft-5,000 sq ft conversion, this would be a way to see how much sediment has been captured. You can use an increase in efficiency to account for this difference (Universal Soil loss). We would need this information by the specific watersheds.
- How does the plan address forested area roads that are eroding? VA Dept. of Forestry has a list of forestland BMPs.
- How does the plan address VDOT projects? These large-scale road projects are not in the BMP list. For example, water bar BMP to reduce erosion on dirt roads is not on the list. The comment was made that runoff goes from the road into the forest. There is a VDOT manual that contains a complete list of all the BMPs that VDOT uses. VDOT will submit a TMDL action plan(s) to meet MS4 requirements. Also, VDOT may have information regarding pilot BMPs, otherwise approved BMPs (not in the 2013 Handbook or Clearinghouse), or BMP research and development. It was suggested that the clean up plan should build onto the VDOT action plan. VDOT is limited to the amount of BMPs that they can implement. *VDOT may also have good cost estimate information for BMP design, construction, and maintenance.*
- A group member asked how someone reports VDOT E&S complaints. Answer is to call 511 and report any observed issues.
- A group member expressed frustration that everyone is not working together and that integration of all of the entities in the room will improve water quality.
- A comment was made that there will be a chapter in the Clean-up Plan that summarizes other watershed initiatives that can support attainment of the IP goals.
- Another challenge mentioned is that people don't know who has MS4 permits.
    - *A list of MS4 and pending MS4 holders in clean-up plan coverage area are provided below:*

Permit Number	MS4 Name/Operator*
VAR040004	City of Roanoke
VAR040010	Salem
VAR040019	Blacksburg
VAR040022	Roanoke County
VAR040023	Botetourt County
VAR040025	Christiansburg
VAR040026	Vinton
VAR040030	Virginia Western Community College
VAR040049	Virginia Tech
VAR040050	VA Medical Center
	VDOT
Pending	Montgomery County

- The focus of the Clean-up Plan is on the landuses within the watershed and what reductions are called for in the TMDLs.

- Could a table be composed to show the MS4? The wasteload allocations assigned to the MS4s is in the TMDL and could be put in the clean-up plan.
- The group was asked if there are additional BMPs that should be included.
- It was suggested that Impervious Area reduction, for example BMP retrofits, be included as BMPs. Is there a way to itemize landuse conversion in the plan so that they may potentially get funding? LBG is not sure of efficiencies, but will to check into this question.
- Industrial Commercial Wash Run-off becomes an illegal discharge for the City of Roanoke; are there BMPs to address this?
- Drain and Inlet maintenance, like cleaning them out, is important for water quality. What about an "Adopt-an-Inlet" program?
- Could velocity or flow rate dispersion (weirs or traps) be considered a filtration BMP?
- It was suggested that a category of Waste management BMPs, or pollution prevention BMPs, to address bacteria reductions be included.
- A suggestion was made that a "pilot BMP" line item be included so there is always a way to be able to receive Grant funding for innovative BMPs.
- The City of Salem brought up the following potential inequity: If in one locality you are required to comply with certain stormwater ordinances, but then in another locality you are going to get a credit for installing a BMP; is this fair? There is a need to give the ordinance-requiring locality recognition of their effort.
    - For example, 97% of land disturbance in urbanized areas is less than 1 acre, but no one gets any "credit" for BMPs on parcels less than 1 acre. There was some discussion regarding crediting and how it relates to MS4 TMDL Action Plans. Localities need incentive to push for their Boards of Supervisors to pay attention to land disturbance less than one acre.
- It was suggested that we need a Stormwater Authority to address stormwater concerns regionally.

Residential BMP Discussion

- Septic system pump outs were discussed. The document lists 5% bacteria removal efficiency. A comment was made that this practice shouldn't be removed from the plan. The removal efficiency data comes from real data collected by Maptech both before and after pump outs.
- Charlie L. has seen IPs that eartag millions of dollars for pump outs. His suggestion is to put a percentage of total houses (like 10%) to be pumped out in the plan.
- Franklin County imposes the pump out on the septic System of houses that are within 500 ft of Smith Mountain Lake.
- Suggested to put the ordinance in the Plan to require pump outs; however, an ordinance cannot be a BMP. Ordinance required areas may not be eligible for various grant funds.
- There is a place in the IP to list all of the regulatory controls (e.g. ordinances) in the IP area that could be a mechanism to support BMP implementation.
- Charlie L. stated that LBG will have to work on prioritization of where the money is most beneficial to improving water quality.

- A question was asked about getting people off of Septic Systems onto sewered areas. Connecting these septic systems is a BMP and the costs are in the plan. It would help if the plan listed potential target areas for sewer connection. There were comments about educating homeowners about septic pump outs and the group thought this would be worthwhile.
- A question was asked about the VPDES permit for single family homes. These are required to have annual maintenance, however there is no enforcement. Another suggestion was that these should be included in this plan. The number of systems could be documented in the plan with an emphasis on the need to maintain these systems. Since they are regulated through a VPDES permit, though, they would not be eligible for grant funding.
- Bioretention practices and raingardens are sometimes quantified as bioretention. These should be broken out since they are more heavily used on residential land; whereas, bioretention practices more so on the urban lands.
- A discussion about BMP tracking came up and it was stated that BMPs must be tracked.
- WVWA is going to quantify the amount of people on septic systems in the City of Roanoke and provide this information to WRABA.
- The $7,500 ($8,000 after January 1) is for connection of homes with failed septic tanks (or wells) only. It does include extension of the water or sewer main up to 1,000 feet. This price also includes the service line from the main to the property line. It does not include whatever piping is need on the lot to get from the home to property line. The deep discount (a 1,000 foot sewer extension can easily cost more than $100,000) is to help homeowners who are experiencing emergencies. This option is not available for developers or homeowners with functioning septic systems.
- WVWA's regular connection fee for sewer is $4,500 ($5000 after January 1). This price includes the service line from the main to the property line but does not include extension of the main. As in the case above, it also does not include the piping that is need on the lot to get from the home to property line.
- Pet waste BMPs were discussed and the group determined that pet waste needs to be addressed primarily at the source: either pick up the feces and dispose of it by flushing it in a toilet or outing it in the trash to be landfilled or treating it by way of a digester or composter on-site.
- Pet Waste Education is creditable.
- Have there been any counts of feral animals in rural areas? Not to anyone's knowledge.
- Where in the developed community is the bacteria coming from? LBG mentioned that controlled sources pose challenges. You can't control the wildlife in your yard, but you could control the run-off leaving your property. SSO, pets, failing septic systems are targeted ways to address sources.
- Salem is going to send LBG data from Street Sweeping.
- A question was asked about bacteria reductions in the forest? Wildlife? Allocation scenario in Carvins shows an 85% reduction from forest land use. LBG explained that reductions are included to meet the TMDL required by state and federal regulation, but this plan will be to the extent most practical. DEQ stated that the TMDLs that were done in 2004 and 2006 are what they are and that the Clean-up Plan needs to address the reductions in a reasonable manner.

- The group discussed that VA has moved away from bacterial source tracking. The anti-biotic resistance method was explained to the group and the project team was certain that all four main sources of bacteria exist in the watershed.
- Wildlife, Livestock, Pets and human are the most common sources as shown by the bacterial tracking. The method however was more just a presence/absence test and it doesn't give real %s. You can't get actual reliable %s until you do DNA sampling which is expensive.
    - Based on acres of forest, riparian areas along streams, and wetlands available, modelers generate estimates for wildlife species numbers and daily loads of bacteria, this gets plugged into the model.
    - Water quality standards are protective and TMDLs have to show a scenario with zero violations of the standard. With respect to the bacteria standard, most streams are not monitored enough [>1 time within a calendar month] to have the geometric mean standard of 126 cfu/100 mL applied. Sampling varies but, in general, DEQ samples bimonthly at many stations.
    - The Clean-up Plan emphasizes on what it will take to get the stream off of the impaired waters list.
- Ashley P. asked if the bacteria standard is up for discussion in the current Virginia Triennial Review of water quality standards.
- Charlie L. – the Commonwealth has tried for years to not have all streams listed for designated use of primary contact recreation
    - Secondary contact standard is on the books; but we can't apply it until we try to clean up a stream.
- Concern of public perception of validity of doing this; looking at Glade/Laymantown where a small percentage is septic and the majority of pollution is other land use.
- The group was reminded that the watershed models are tools to help describe the watershed and how water quality responds to the application of BMPs.
- WVWA suggested that municipalities would want to fund more monitoring.
- Diana H. stated that the Clean-up Plan is part of a process and that we continue to evaluate how the plan and practices are working with monitoring and re-evaluation.
- Cristina S. mentioned that the CVC provides citizen monitoring opportunities.
- URRR trains monitors; however, if URRR had seen the TMDL maps, they may have redirected volunteers
    - There should be more monitoring and it should be more directed
    - Monitoring is expensive; it costs to train and for kits
    - We don't get enough monitors because of lack of education
    - Jay R. suggested that MS4s might want to make monitoring part of their action plans to help their efforts and this area.
- Mary D. said that eventually we'll look at stations and where we may want to monitor in the future for the Follow-up Monitoring section of the Plan.

Agricultural BMPs Discussion:

- Not a lot of Ag BMPs or cropland
- Ag BMPS are from DCR database. Voluntary BMPs may or may not have been reported.
- Chuck – what is the relationship with the agricultural industry? Ag E&S monitored by departments other than the localities
- It's incentive-based on the agricultural side of BMPs
    - VDACS deals with compliant-based problems to help producers deal with issues
- How many states have state laws to prohibit cows from going in the stream?
    - State is right now paying for 100% cost-share
    - Can't regulate everything. How many regulations on the books are not enforced?
    - Maybe an overlay district
    - We need the messengers that will convince the farmers that these BMPs are good for them
    - How to represent this without mentioning DEQ – districts have the relationships with their constituents